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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Kari Torkkola

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EXAMINER

PREVIL, DANIEL

ART UNIT

PAPER NUMBER

2612

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/748,549	Applicant(s) TORKKOLA ET AL.	
	Examiner Daniel Previl	Art Unit 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6, 9-13 and 15-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9-13, 15-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This action is responsive to communication filed on November 30, 2005.

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-6, 9-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claim 1, the phrase "using one of a linear function of the sensor data, a non-linear function of the sensor data" in lines 4-5, was not described in the specification.

Claims 2-6, 9-11 are rejected for the same reason since they depend from a rejected claim.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 10-13, 16-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy (US 6,232,874) in view of Iwami et al. (US 2002/0111738 A1).

Regarding claim 1, Murphy discloses a method of classifying an activity state of a driver (method of identifying the restricted operator) (col. 4, lines 42-47) comprising: providing an at least two-state activity classifier (performing one or more suitable tests to determine if the indicium belongs to an identified RO and determining if one or both of the preceding test is answered in the negative) (col. 5, lines 16-20 and lines 33-38); receiving sensor data relating to at least one vehicle operating condition (LD system to determine and display a maximum vehicle velocity allowed for the present vehicle location) (col. 5, lines 30-32); classifying the driver activity into one of at least two states based upon the sensor data (col. 5, lines 16-40), a first of the at least two states corresponding to a maneuver activity (present location and/or speed) (col. 5, lines 23-25) and a second of the at least two states corresponding to a non-maneuver activity (disable the vehicle at a selected time so that the vehicle no longer operated) (col. 5, lines 33-37).

Murphy discloses all the limitations above but fails to explicitly disclose the step of using one of a linear function of the sensor data, a non linear function of the sensor data and a statistical classifier, the classified state of the at least two states to determine whether the driver is capable of receiving an event in the vehicle.

However, Iwami discloses the step of using one of a linear function of the sensor data, a non linear function of the sensor data and a statistical classifier (calculating a proximity factor  $x$  in fig. 7-8); the classified state of the at least two states to determine whether to send an event to the driver of the vehicle (page 3, paragraph 0042, paragraph 0044 and paragraph 0048-0049).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Iwami in Murphy. Doing so would modify Murphy's system with Iwami's system in order to provide information of use to the driver thereby selecting a priority of information to prevent driver distraction that can lead to vehicle accident as taught by Iwami (page 1, paragraph 0004).

Regarding claim 2, Murphy discloses the step of classifying the state of the driver activity as maneuver when engaged in an activity corresponding to one of a change in the position of a vehicle with respect to a freeway ingress or freeway egress (commute to and from work) (col. 3, lines 44-51).

Regarding claim 3, Murphy discloses the step of classifying the state of the driver as non-maneuver when disengaged from an activity corresponding to one of a

Art Unit: 2612

change in the position of a vehicle with to a communication with an external party (audible perceptible to a person outside the vehicle) (col. 5, lines 33-65).

Regarding claim 4, Murphy discloses the step of receiving a second sensor data relating to a least one of a condition of the driver (RO) (col. 3, lines 25-51).

Regarding claim 5, Murphy discloses the step of analyzing a position and a rate of change of the position of an accelerator, a clutch and gear selector (col. 5, lines 41-45).

Regarding claim 10, Murphy discloses altering the presentation of an event in the vehicle when classifying the activity state of the driver is maneuver (col. 5, lines 16-32).

Regarding claim 11, Murphy discloses the event is a wireless communication (GPS) (fig. 1; col. 3, lines 52-63).

Regarding claim 12, Murphy discloses a two-state classification apparatus for classifying an activity state of a driver (performing one or more suitable tests to determine if the indicium belongs to an identified RO and determining if one or both of the preceding test is answered in the negative) (col. 5, lines 16-20 and lines 33-38); comprising: an input for receiving sensor data relating to at least one vehicle condition (LD system to determine and display a maximum vehicle velocity allowed for the present vehicle location) (col. 5, lines 30-32); and a processor coupled to the input (fig. 6, ref. 175), wherein the processor (175) (fig.

6) analyzes the sensor data to determine a classification of the activity state of the driver into a maneuver and non-maneuver (fig. 3; col. 13, lines 29-45).

Murphy discloses all the limitations above but fails to explicitly disclose the step of using a statistical classifier, utilizing the classification of the activity state to determine whether to send an event to the driver of the vehicle.

However, Iwami discloses the step of using a statistical classifier (guidance information in fig. 1, page 4, paragraph 0052), utilizing the classification of the activity state to determine whether to send an event to the driver of the vehicle (page 3, paragraph 0042, paragraph 0044 and paragraph 0048-0049).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Iwami in Murphy. Doing so would modify Murphy's system with Iwami's system in order to provide information of use to the driver thereby selecting a priority of information to prevent driver distraction that can lead to vehicle accident as taught by Iwami (page 1, paragraph 0004).

Regarding claim 13, Murphy discloses an output for conveying a signal relating to the classification of the activity state of the driver (information obtained by the BIRAM 177 is sent to controller module 179) (fig. 6, col. 13, lines 37-45).

Regarding claim 16, Murphy discloses the classification of non-maneuver enables an event in the vehicle (col. 5, lines 33-45).

Regarding claim 17, Murphy discloses the classification of maneuver delays an event in the vehicle (system reduces the vehicle speed) (col. 5, lines 41-45).

Regarding claim 18, Murphy discloses an event notification of a change in state of an other apparatus in the vehicle (60-65).

Regarding claim 19, Murphy discloses the sensor data corresponds to a driver condition data (col. 5, lines 21-32).

Regarding claim 20, Murphy discloses the processor analyzes the sensor data corresponding to a driver identification (fig. 6).

Regarding claim 21, Murphy discloses one vehicle condition is a vehicle mechanical condition (driver's wheel) (col. 2, lines 25-32).

Regarding claim 22, Murphy discloses one vehicle condition is a vehicle speed, turn signal state and steering wheel position (col. 5, lines 24-43).

Regarding claim 23, Murphy discloses the classification corresponds to a current condition of the sensor data (col. 4, lines 31-38).

Regarding claim 24, Murphy discloses the classification corresponds to a past condition of the sensor data (col. 4, lines 1-17).

Regarding claim 25, Murphy discloses a vehicle arranged and constructed to use a classification of an activity state of a driver (col. 3, lines 25051) comprising: a classification apparatus for providing a signal corresponding to one of maneuver and non-maneuver (col. 5, lines 16-46);



the signal based on a sensor data related to at least one operational condition (LD) (col. 5, lines 25-26); and a device operable to use the signal for determining a timing for notifying the driver of an event (col. 5, lines 52-65).

Murphy discloses all the limitations above but fails to explicitly disclose a statistical classifier (guidance information in fig. 1; page 4, paragraph 0052).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Iwami in Murphy. Doing so would modify Murphy's system with Iwami's system in order to provide information of use to the driver thereby selecting a priority of information to prevent driver distraction that can lead to vehicle accident as taught by Iwami (page 1, paragraph 0004).

Regarding claim 26, Murphy discloses the signal corresponds to a non-maneuver and the timing is immediate for notifying the driver of the event (col. 5, lines 48-65).

Regarding claim 27, Murphy discloses the signal corresponds to maneuver and the timing is delayed for notifying the driver of the event (col. 5, lines 25-65).

Regarding claim 28, Murphy discloses the device is a wireless communication device (fig. 1).

Regarding claim 29, Murphy discloses the sensor data corresponds to a driver condition data (col. 5, lines 21-32).

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy in view of Iwami et al (US 2002/0111738) and further in view of Geisler et al. (US 2004/0088205).

Regarding claim 6, Murphy and Iwami discloses all the limitations in claim 1 but fails to explicitly disclose the driver activity state using one of instantaneous sensor data and prior sensor data.

However, Geisler discloses the step of classifying the driver activity state using instantaneous sensor data (fig. 1, ref. 110; page 1, ref. 0012).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Geisler in Murphy and Iwami. Doing so would have provided the system with the capability of providing the driver with prioritized information to prevent the driver from being distracted by less important information and to preclude accident from happening for the safety purposes as taught by Geisler (page 1, ref. 0003).

4. Claims 9, 15, are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy in view of Iwami and further in view of William Cohen (ML 95 provided by Applicant).

Regarding claim 9, Murphy and Iwami disclose all the limitations in claim 1 but fail to explicitly disclose a C4.5, a RIPPER and a QUADRATIC classifier.

However, William Cohen discloses a C4.5, a Ripper (abstract, page 7, ref. 4.4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of William Cohen in Murphy and Iwami. Doing so would improve the driver performance by significantly reduce the error rates for the safety purposes as taught by William Cohen (abstract).

Regarding claim 15, Murphy, Iwami and William Cohen disclose all the limitations in claim 12 and William Cohen further discloses a C4.5, a Ripper and a Quadratic classifier (abstract, page 7, ref. 4.4). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of William Cohen in Murphy and Iwami. Doing so would improve the driver performance by significantly reduce the error rates for the safety purposes as taught by William Cohen (abstract).

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-6, 9-13, 15-29, have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kinoshita et al. (US 5,642,093) discloses a warning system for vehicle.

Kubota et al. (US 6,401,029) discloses an assist device in designation of destination.

Pter-Contesse (US 4,155,525) discloses a maneuver detector circuit for use in autothrottle control systems having thrust and flight path control decoupling.

Onari et al. (US 4,853,720) discloses a condition adaptive-type control method for internal combustion engines.

Graf et al. (US 6,188,945) discloses a drive train control for a motor vehicle.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Previl whose telephone number is 571 272-2971. The examiner can normally be reached on Monday-Thursday. The examiner can also be reached on alternate Fridays.

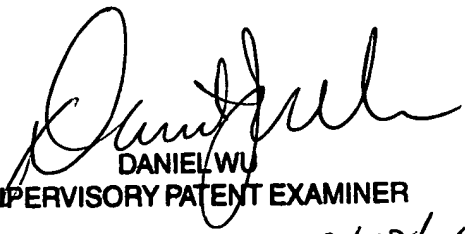
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel WU can be reached on 571 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571 273-8300.

Art Unit: 2612

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Previl  
Examiner  
Art Unit 2636

DP  
September 13, 2006.

  
DANIEL WU  
SUPERVISORY PATENT EXAMINER  
9/18/06